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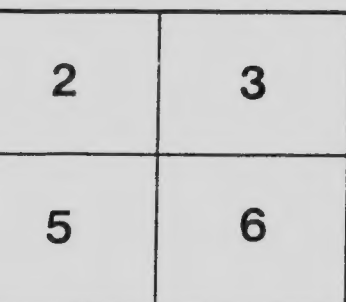
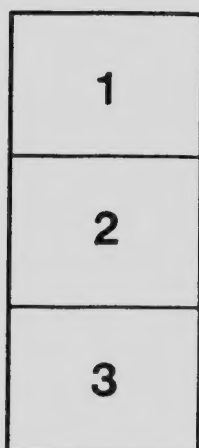
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61-98: 65, 74, 75, 87 99 200

FEEDING OF SHEEP

BY

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AND

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UTILITY.

Of all farm animals, the sheep is best adapted for the profitable utilization of waste. In Western Canada they may clean summer fallow with two-fold profit. Universally they are efficient weed destroyers on roadsides, lanes, summer fallow and weedy corners. Rough, hilly, rocky or wooded pastures give ideal and natural grazing conditions. Waste land generally, may be profitably utilized provided good fences are in place. Their value as producers of fertilizers on fallow, pasture, aftermath, etc., is a very appreciable item. Nevertheless, sheep must not for the above reasons, be made to subsist entirely from such sources for livelihood. When pasture is scarce or bare extra feed is an economy, as will be treated more fully. In winter, while cheap roughage are the main item, grain must be fed for maximum profits.

The Breeding Ewe: Flushing.—Previous to the breeding season flush the ewe, or have her in rising condition. Good pasture, clover aftermath or rape with grass are excellent. A grain mixture of oats, 3 parts; bran, 1 part; may be fed, one-half to one pound per day as needed, provided ewes are not already fat. Usually light grain feeding at this time is decidedly economical practice. If the ewe is in low condition at breeding, single lambs, poor conditioned and weak, will be dropped, with low milk production by the ewe. Result—a poor lamb under any subsequent treatment. If too fat, the ewe is difficult to get with lamb and will usually give trouble at lambing time.

Early Winter Feeding.—For the early winter months the following ration is good: Hay, 2 to 3 pounds, or pea straw unthreshed, 2 to 3 pounds; roots, 2 pounds; feed latter sparingly, and only with plenty of exercise; ensilage and roots, 4 pounds; feed grain at this time only if the ewes are thin. Supply salt and water.

Late Winter Feeding (previous to Lambing).—Hay, 2 to 3 pounds; ensilage, 2 to 3 pounds; grain, 1 to 3 pounds; salt and water. The above feeding methods should prevent indigestion, impaction and constipation (see later). Clip tags and loose wool from hind quarters and about teats, to avoid later difficulties with weaning lambs, from wool-balls, etc. Be present at lambing-time to assist difficult cases and help weak lambs to nurse, etc.

After Lambing.—Feed for milk. If on pasture a limited grain ration may be fed, depending on the quality of pasture, flesh of ewe and growth of the lamb. If in pen or paddock, feed hay, 2 to 3 pounds; turnips, 4 pounds; or turnips and ensilage (equal parts), 4 pounds; grain mixture, oats, 5 parts; bran, 1 part; linseed oilmeal, 1 part, 1 to 3 pounds daily, as needed. Shear early. Do not expect the ewe to produce economically during the later spring months, loaded down with a heavy, hot fleece. Dip with any of the good proprietary sheep dips (Cooper's, McDougall's, etc.). Besides directly saving feed by early dipping, the ewes are contented, milk, and thrive

DOMINION EXPERIMENTAL FARMS.

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better, with corresponding gains by the lambs and both the health of the skin and the growth of wool are promoted. Dip the whole flock shortly after shearing, giving special attention to the lambs, and again late in the fall.

Summer Feeding.—With good pasture and fair range no grain feeding is necessary. Wean in September, to leave sufficient time for flushing the ewe preparatory to breeding.

The Breeding Ram.—*In summer* allow the ram either free range with the flock or a good grass paddock with shade. *In fall* keep him in a paddock away from the ewes. For a short time before his services are required, feed a grain mixture of oats, 3 parts; bran, 1 part. *During the breeding season* continue the same grain feed. Guard against extremes in condition. If the ram is thin and of lowered vitality a poor crop of lambs, both in numbers and quality will probably result. If over-fat, he will likely be sluggish, lazy and indifferent at service, with the result that many ewes will be bred repeatedly and others fail to breed, the latter condition predisposing to permanent difficulty in this regard. *During the winter* maintain good breeding condition, avoiding over-fatness. Feed good clover hay. Turnips and mangels, are both safe, healthful foods for ewes. Rams, however, should receive no mangels owing to their causing the formation of gall stones. Turnips are excellent.

Feeding the Lamb.—The lamb requires mother's milk as soon after lambing as possible. Give assistance if necessary. Feed the lamb through the ewe for the first three weeks, after which, build a creep or pen, admitting only the lambs. Feed small quantities of a mixture of crushed oats and bran, to which may later be added a little oilcake. A rack, containing some specially selected clover hay, may also be placed in the creep, if needed. Castrate and remove tails before lambs are four weeks of age.

Summer Feeding.—When pastures get bare or burned, supply lambs a light grain mixture of oats, 2 parts; barley, 2 parts, or oats, 2 parts; bran, 1 part, fed in a creep or corner, fenced off to exclude the ewes. Watch for unthrifty, staring-coated lambs, that for no apparent cause lack vitality, and are poor feeders. Tape or stomach worms may be the cause. Verify this by examination of the droppings (see later). Such preparations as Medico, Sal-Vet, etc., besides being of tonic value, are particularly efficacious in keeping sheep free from internal parasites.

The Weaning Lamb should have access to a special pasture other than that for the flock. Aftergrass may be utilized to advantage. Guard against over-feeding and bloating. Light feeding of the preceding mixtures may be continued.

The Breeding Lamb.—Keep the breeding lamb growing on aftergrass, stubble, or rape in conjunction with grass or pasture and grain, if needed.

Market Lambs.—See foregoing.

Avoid turning lambs on clover or alfalfa aftermath or rape, when these crops are wet or frozen. Feed rape only in conjunction with grass. See that the lambs are not hungry before turning on any of foregoing pastures, particularly at first. Rather give a feed of bran and oats in the morning or allow them on a grassy pasture first, while the clover dries of dew. This will largely prevent bloat (see later). *Don't sell the lambs in a light unfinished state.* Finish them for Christmas or Easter and by thus marketing home-grown feeds, make \$1 to \$1.50 per lamb, over selling early, in the unfinished state. *Winter finish or fattening rations.* Roots (turnips preferable if there are any wethers) 4 to 6 pounds; or ensilage and roots, equal parts, 4 to 5 pounds; hay, clover and fine grass, 1½ to 3 pounds; grain mixture as follows:—

1. Oats, 3 parts; bran, 1 part; corn, 1 part.
2. Oats, 4 parts; bran, 2 parts; oilcake, ½ part.
3. Oats, 2 parts; bran, 2 parts; oilcake, 1 part; corn, 2 parts.

Start with 4 pound per lamb per day, finishing with 1 pound per day. Elevator screenings, as sold from government elevators, or containing a minimum of black-seeds (mustards, etc.) are economical in the grain ration. In Ontario and many sections of Canada, barley is more easily obtained than corn or even bran. It forms an

excellent feed and may replace either of the constituents mentioned, in the foregoing ration. Supply salt and water.

Pastures.—Sheep are peculiarly subject to internal parasites, due to infested pastures, the result of continued grazing in one limited pasture, year after year. Provide a change each year, allowing the pasture of the previous year to cleanse itself. Cultivation and seeding down will effectively accomplish this.

Green Feeds.—Generally speaking, stock-feeding is not profitable. It is preferable to fence off portions of the field and allow the sheep to graze. Supplying cut green feed is expensive, involving labour when it is scarce; wasteful, because cut green food rapidly wilts and becomes distasteful to sheep.

Rules for Feeding.—Feed only what the animals will clean up. Sheep are particular breeders and will refuse left-overs. (2) Make changes slowly. (3) Supply salt at all times and water even if the sheep uses but little. (4) Avoid digestive and intestinal troubles in winter by using well-cured green cut roughage and succulents. (5) Avoid overfeeding on clover, alfalfa, grass, or rape in summer. (6) Avoid extremes in the condition of breeding stock.

THE HEALTH OF SHEEP.

The Health of Sheep is adversely affected mainly through parasites, external and internal, and by conditions and maladies the result of overfeeding, the absence of succulents, lack of range, and failure to observe comparatively simple details. Brief mention is herewith made of certain affections, the general treatment for which would be prevention.

Ticks and Lice.—Examine sheep and lambs from time to time for presence of these parasites.

Treatment.—As already outlined. The dipping outfit illustrated (circular No. 80) is easy and cheap to construct, the tank requiring the minimum amount of fluid. Use any good proprietary dip.

Tape Worms.—*Cause:* Infested pastures due to the use year after year of restricted areas.

Symptoms usually appear in lambs being unthrifty with staring coats and showing lack of vigor, loss of appetite and scouring. Sections of tapeworms are frequently passed.

Treatment.—In general, prevent by changing pastures annually, and allowing more range if possible. Rid infested animals by following treatment: Remove all feed from the animals to be treated for from 12 to 20 hours. Administer at 9 o'clock a.m. 1 dram Etherial Extract of male fern in 4-ounce castor oil, for adults. For lambs $\frac{1}{2}$ -dram male fern in 2 ounces oil. At 2 p.m. same day have following ingredients (tonic and worm-expellent) made up in water solution: Salt, 2 pounds; nitre, 2 ounces; Epsom salts, $\frac{1}{2}$ pound; iron sulphate, 4 ounces; powdered gentian, 4 ounces. This is sufficient for fifty mature sheep. If made up in 200 ounces water, give adults 2 or 4 ounces; lambs, 2 ounces. The successful action of above mixtures depends largely on whether the animal's digestive tract is free from food. Feed sparingly at evening feed, after treatment, and keep the treated animals in a pen for 24 hours to prevent the spread of the tape-worm segments.

Stomach Worms.—*Treatment:* Remove all food over-night. In the morning administer 5 ounces of cow's milk, 1 tablespoonful gasolene, 1 tablespoonful raw linseed oil. Repeat for three successive mornings. Stomach worms are white in colour and about three-quarters of an inch long. Tape-worms from 1 to 6 yards. Symptoms similar in both cases.

Constipation or Impaction.—*Symptoms:* Loss of appetite, dullness; animal lies apart from flock, etc.

Cause.—Lack of succulent feed; too much dry coarse feed.

Treatment.—For adults 4 ounces castor oil or 4 ounces Epsom salts as a drench. If no action in six hours, repeat. Give injections of warm water with a little soap or glycerine. Remove cause to prevent further cases. With lambs give 2 ounces castor oil shaken up with cow's milk.

Diarrhoea.—*Cause:* Feeding too much roots without exercise; frozen rape, turnip tops, grass or clover; sudden changes in diet.

Treatment.—Remove cause by changing to dry feed. Give 3 to 4 ounces castor oil with 1 dram each of laudanum and ground ginger. Starch and flour gruels in persistent cases.

Acute Indigestion, Hoven or Bloat.—*Symptoms:* Uneasiness, colicky pains, bloating.

Cause.—Overfeeding; sudden changes in diet; usually seen in summer and fall due to over-feeding on clover, rape, etc.

Treatment.—If noticed in time give $\frac{1}{2}$ ounce hyposulphite soda; 1 dram ginger; 1 pint water. Follow with 4 to 6 ounces raw linseed oil and $\frac{1}{2}$ ounce turpentine. Milk, warm from the cow, is also recommended, a pint at a dose. If bloating is extreme tap with trocar and canula on left side midway between point of hip and last rib. A highly recommended treatment, or recent origin, is $\frac{1}{2}$ ounce 40 per cent formalin in 1 pint water. Tie a wooden block in the animal's mouth. Exercise gently, if animal can walk.

Colic or Stretches.—*Cause:* Over-feeding on frozen roots, clover, corn stalks, silage, causing a chill to the stomach.

Symptoms.—Stretching the body; lying and turning.

Treatment.—One tablespoonful sweet spirits of nitre in water will relieve pain. Repeat later, if necessary. Give mild purgative, castor oil or raw linseed oil.

Caked Udder (Inflammation of the Udder).—*Cause:* Too heavy feeding before lambing, too heavy milk secretion for lambs' need, draughts, injuries, damp bedding, neglect of shepherd to remove milk at weaning time.

Treatment.—Remove cause. Reduce feed. Milk out affected teat. If much swelling, bathe and rub in camphorated oil. Strive to prevent inflammation. If this occurs give 4 ounces Epsom salts in one-half pint of water. Bathe repeatedly with hot water. Rub in ointment of lard, 8 parts; bella donna, 1 part. Feed lightly on clover hay and bran with chilled water to drink. Should abscesses appear open and syringe out with 2 per cent carbolic or pure hydrogen peroxide.

Wool Balls; found in Lambs.—*Cause:* Usually due to wool tags about the ewe's udder; digestive troubles, causing unnatural cravings; biting at sides to relieve irritation due to ticks.

Treatment.—As mentioned, clip tags from ewe's sides before lambing. If due to habit, give wide range, supply salt, lime phosphate or bone-meal. If much wool has accumulated blocking the digestive tract, little can be done. Linseed oil in small doses recommended. Treatment almost wholly preventive.

TO DRENCH A SHEEP.

Sheep are easily and usually fatally choked. Administer drenches with great care. If the sheep is small, straddle it; otherwise back it into a corner and stand on right side. Place left hand on jaw, with thumb in mouth on tongue and between front and back teeth. Do not hold the head too high. Pour contents of bottle slowly, a little at a time. Do not hold the under jaw tight against the upper. In short give the animal every opportunity to swallow as naturally as possible, and little difficulty should occur.

The use of Stock Foods.—While sheep are benefited by certain proprietary preparations, as dipping fluids (Cooper's, McDougall's, etc.), and by compounds in the nature of a combined relish, tonic and worm-expellent (Sal-Vet, Medico, etc.)—the value of many of the stock foods on the market, at the prices asked, is questionable.

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